

**REMARKS**

Claims 20-23 and 26-63 currently appear in this application. Claims 26-63 have been withdrawn. The Office Action of March 19, 2008, has been carefully studied. These claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration, entry of the present amendment, and formal allowance of the claims.

**What is Claimed**

The present application is directed to a method for separating and recovering an acid/sugar solution as well as a lignophenol derivative. This is effected, as claimed in claim 20, using an amount of water that is 0.5 to 6 times the amount of the mixture as a volume ratio. The amount of water added to recover both the acid/sugar solution and the lignophenol derivative is critical to the claimed method.

**Art Rejections**

Claim[s] 20 are sic] rejected under 35 U.S.C. 102(b) as being anticipated by Funaoka et al., JP 2002/105240.

This rejection is respectfully traversed. The Examiner alleges that "The reaction is then quenched with water so that the total volume is 5 L (4050 ml) water.

Therefore the water is added in an amount of  $\sim 4.26$  (2050/950) times by volume of the reaction mixture." This appears for come from the Derwent abstract.

It is respectfully submitted that Funaoka does not disclose that the reaction mixture of 950 ml is quenched with water to prepare a product of 5L total volume. Rather, Funaoka discloses that the reaction mixture is equally divided into two Erlenmeyer flasks and then water is added to each of the flasks containing one half of the reaction mixture so that the total volume is 5L.

Submitted herewith is an English translation of paragraph 0043 of Funaoka. That is, in Funaoka, 950 ml (150 ml + 0.8 L in the case of a beech tree) or 135- ml (150 ml + 1.2L, in the case of hinoki cypress) of the reaction mixture is divided into two 475 ml or 675 ml reaction mixtures, and 4525 ml or 4325 ml of water is added to each of the 475 ml or 675 ml reaction mixtures, so as to reach 5L of total volume. Therefore, in Funaoka, the ratio of water: reaction mixture is about 9.5 (4525/475) or about 6.4 (4325/675), and these ratios of water: reaction mixture are different from claim 20 of the present application.

For the reasons given above, it is respectfully submitted that claim 20 is not anticipated by Funaoka. It is further respectfully submitted that Funaoka is silent with

respect to the ratio recited in claim 20, and that Funaoka neither teaches nor suggests adjusting the water: reaction mixture ratio so as to efficiently recover both a lignophenol derivative and a sugar solution.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funaoka in view of Tournier et al., US 4,511,433.

This rejection is respectfully traversed. As noted above, the herein claimed process is completely different from that of Funaoka, because Funaoka neither teaches nor suggests the water: reaction mixture ratio claimed herein, which results in recovering both a lignophenol derivative and a sugar solution. Tournier adds nothing to Funaoka, because Tournier merely teaches separating lignin-phenol from cellulose by filtration. However, Tournier has nothing to do with the herein claimed water: reaction mixture ratio.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funaoka in view of Mattison et al., US 4,936,999.

This rejection is respectfully traversed. As noted above, the herein claimed process is completely different from that of Funaoka, because Funaoka neither teaches nor suggests the water: reaction mixture ratio claimed herein, which results in recovering both a lignophenol derivative and a

sugar solution. Mattison adds nothing to Funaoka, because Mattison merely teaches a second filtration step. However, Mattison has nothing to do with the herein claimed water: reaction mixture ratio.

Allowable Subject Matter

Claim 21 is objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As it is believed that the base claim from which claim 21 depends is allowable, it is respectfully submitted that it is not necessary to rewrite claim 21 as an independent claim.

In view of the above, it is respectfully submitted that the claims are now in condition for allowance, and favorable action thereon is earnestly solicited.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.  
Attorneys for Applicant

By: 

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Anne M. Kornbau  
Registration No. 25,884

AMK:srd  
Telephone No.: (202) 628-5197  
Facsimile No.: (202) 737-3528  
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English translation of paragraph [0043] of JP2002-105240

[0043]

(2) Concentrated Acid Treatment

The absorbed wood flour was equally divided into four 3L beakers (250g wood flour per one beaker). The following description is for one beaker. 72% of sulfuric acid (about 1.2L in the case of hinoki cypress, about 0.8L in the case of beech tree) was added portion-wise to the beaker with stirring with a glass bar. All of the wood flour was brought into contact with sulfuric acid, and then stirred vigorously. After 10 minutes from completion of the addition of sulfuric acid, a stirrer was started. After one hour from the completion of addition of sulfuric acid, the stirrer was stopped. The content of the beaker was divided into two halves into two 5L Erlenmeyer flasks, each of which contained 2-3L of deionized water, so as to terminate the reaction. Deionized water was added to the flasks so that the total volume in the flask reached 5L; and the flasks were left for two days.